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| 09/960,673 | 09/21/2001 | Thomas Jaskiewicz | SMQ-076 | 5611 |

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| EXAMINER | |
|---|---|
| POLTORAK, PIOTR | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2134 | |

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/960,673 | JASKIEWICZ ET AL. | |
| | Examiner | Art Unit | |
| | Peter Poltorak | 2134 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *9/21/2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1. Claims 1-21 have been examined.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-17 and 19-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention.
3. Claims 1, 4, 9, 13, 15 and 19 are method claims that recite steps of a method in a network environment. Each of these claims contains at least one apparatus and process, both contained within a single claim. (Consider the first step of claim 1 is drawn to a method: *"proving a software facility interfaced with said network"* and product: *"said storage policy including attribute requirements"*).
   As a result it is ambiguous as to what statutory class of invention the claims falls within, and as such they are indefinite. See MPEP 2173.05 (p) II.
4. In claims 3 and 13 it is not clear to whom the specified attributes are directed.
5. The term "dynamically configured" in claim 6 is not understood. Since the specification refers to the term giving an example of a RAID controller that comprises RAID level ("If the attribute is dynamically configurable, such as by configuring available magnetic disk drives together into a RAID set with a given

RAID level, the requested attribute is dynamically configured for a storage location") the examiner considers that the teaching of claim 11 meets the "dynamic configuration" of claim 6.

6. The limitation: "placing a storage location into a pool of storage locations unavailable to said software facility" in claim 8 is not understood. The specification does not provide any explanation and the examiner cannot ascertain the metes and bounds of the claim. For example, during the failure of a storage location (which is likely to happen in storage systems) the event automatically places the failed storage location into "a pool" of unavailable storage locations.
7. Claims 2-3, 5-8, 10-14, 16-17 and 20-21 are rejected by the virtue of their dependence.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 4-9, 11-12, 14 and 18-19 are rejected under 35 U.S.C. 35 U.S.C. 103(a) as being unpatentable over *Bakke et al. (U.S. Patent No. 6330621).*

9. As per claims 4-5 and 18-19 *Bakke et al.* teach an intelligent data storage manager (IDSM) 110 connected to a plurality of hosts 111-114. IDSM comprise a plurality of data storage devices, and a logical device manager 104 *(Fig. 1),* which meets the limitation of providing a software facility interfaced with said network. *Bakke et al.* teach that the logical device manager 104 uses weighted values that are assigned to each of the presently defined logical devices to produce a best fit solution to the requested policies and maps the virtual device to the user data *(Col. 3 lines 32-36).* This reads on using said software facility to identify by attribute available storage locations on said plurality of devices; and using said software facility to perform allocation of said available storage locations based on said available storage location attributes, said allocation being the association of a storage location with an owner that has write permissions to the storage location.
10. *Bakke et al.* do not explicitly teach that the owner of the data storage has a read access to the storage location. However, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to allow the data storage owner to read data from the storage location. One of ordinary skill in the art would have been motivated to allow the data storage owner to read data in order to retrieve the previously stored data.
11. As per claims 6,11-12 *Bakke et al.* teach that the data storage devices include a RAID disk array *(col. 3 line 17).*
12. Claim 14 is implicit since the logical device manager must be stored on an electronic device in order to perform concrete functions.

13. As per claims 7 and 18 *Bakke et al.* do not explicitly teach allocating unallocated storage locations and placing an unallocated storage location a pool of storage locations available.

    However, Official Notice is taken that it is old and well-known practice to keep track of allocated and unallocated storage locations. One of ordinary skill in the art at the time of applicant's invention would have been motivated to track allocated and unallocated storage locations in order to provide data integrity.

14. As per claim 8 *Bakke et al.* do not explicitly teach placing a storage location into a pool of storage locations unavailable to the software facility.

    Official Notice is taken that it is old and well-known that storage locations fail. One of ordinary skill in the art at the time of applicant's invention would be motivated to keep track of failed storage locations (e.g. in "a pool" table) for benefit of data and system integrity.

15. As per claim 9 *Bakke et al.* do not teach placing newly discovered unallocated storage locations into a pool of storage locations awaiting further action by the software facility.

    Official Notice is taken that it is old and well-known practice to add new storage devices and storage devices contain storage locations. It is also old and well-known that the discovered new devices are awaiting further actions (e.g. allocating, formatting, etc.) One of ordinary skill in the art at the time of applicant's invention would have been motivated to introduce a new storage device to increase potential storage space and to replace faulty devices.

16. Claims 1-3, 13, 15-16 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Bakke et al. (U.S. Patent No. 6330621)* in view of *Microsoft 2000* as illustrated by *Brown (Brown et al., "Microsoft Windows 2000 Server Unleashed, ISBN: 0672317397)*, *Microsoft ("Microsoft Windows 2000Server: Distributed Systems Guide", Microsoft Corporation, ISBN: 15723218058)* and *TechNet ("Automating Administrative Tasks, Policies and Procedures, http://www.microsoft.com/technet/prodtechnol/windows2000serv/maintain/operate/04w2kada.mspx?pf=true).*

17. As per claims 1-2, 15-16 *Bakke et al.* teach an intelligent data storage manager (IDSM) 110 connected to a plurality of hosts 111-114. IDSM comprises a plurality of data storage devices *(Fig. 1)*. In addition IDSM comprises a policy manager *(105)* that handles allocation of data received from the hosts *(col. 3 lines 1-2 and 8-12)*. Furthermore *Bakke et al.* teach policy attributes *(Table 1, pg. 3-4)*. This reads on providing a software facility interfaced with said network for identifying and allocating said storage locations to a storage owner based on the attributes of said storage locations.

18. Furthermore *Bakke et al.* teach storage device support attributes that are used to determine the perfect device, as specified by a policy *(col. 5 lines 43-63)*. This reads on programmatically applying said storage policy to storage decisions on said network using said software facility, said storage decisions determining where data on said network is stored.

19. *Bakke et al.* teach data storage manager 110 that evaluates available devices and compares it with the policy defined by a user *(col. 7 lines 16-39).* This reads on receiving with said software facility a network storage policy from a user.

20. *Bakke et al.* do not explicitly teach that the policy is received from an authorized user, and that the authorized user has authority to control access to said storage locations on said network.

21. *Microsoft 2000* teaches network policies wherein an authorized user *(administrator, Brown, Predefined Default Groups section and TechNet, Group Policy Management section)* selects attributes from a list *(Microsoft, Administrative Templates section and Fig. 22.3)* and a network location that receives the network policy from an authorized user *(Microsoft Tech, Creating and Editing Site, Domain, and Unit Policies section).*

    It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to accept a network storage policy from an authorized user, who has authority to control access to said storage locations on said network as taught by *Microsoft 2000.* One of ordinary skill in the art would have been motivated to perform such a modification to use the policy in order to determine the perfect device for received data while simplifying administration activities.

    Administrators have access to storage location on a network.

22. As per claims 3 *Bakke et al.* teaches that all devices have a set of attributes that are used to determine a storage device, as specified by user policy *(col. 5 lines 60-65).*

Configuring storage locations to provide specified attributes pursuant to the network storage policy *(col. 3 lines 27-50).*

23. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Bakke et al. (U.S. Patent No. 6330621)* in view of *RFC 2165.*

24. *Bakke et al.* teach the software facility and devices attached to a network.

25. *Bakke et al.* do not teach that the software facility uses the SLP to identify available devices attached to the network.

26. *RFC 2165* teaches a software facility that uses the SLP to identify available devices attached to the network *(Introduction).*

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to configure the software facility to use SLP to identify available devices attached to the network as taught by *RFC 2165.* One of ordinary skill in the art would have been motivated to perform such a modification in order to eliminate the need for a user to know the name of a network host.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (571)272-3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (571) 272-3838. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Signature*

6/23/05

*Date*

David Y. Jung
Primary Examiner

6/25/05